

**BY ORDER OF THE CHIEF,  
NATIONAL GUARD BUREAU**



**MANPOWER STANDARD 41D1TC**

**9 SEPTEMBER 2004**

***Manpower Standard***

**COMBAT READINESS TRAINING CENTER  
FUELS MANAGEMENT**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

---

**NOTICE:** This publication is available digitally on the NGB PDC WWW site at:  
<http://www.ngbpdc.ngb.army.mil/angseries.asp>

---

OPR: ANG/XPME (Maj B. Cotton)  
Supersedes ANGMS 4170C, 15 Aug 1992

Certified by: ANG/CS (Col S. Wassermann)  
Pages: 24  
Distribution: F

---

This Air National Guard Manpower Standard (ANGMS) quantifies the manpower required to accomplish the tasks described in the work center description (WCD) for varying levels of workload in the Combat Readiness Training Center (CRTC) Fuels Management function whose mission is to provide an integrated, year-round, realistic training environment (airspace, facilities, equipment) for units to enhance their combat capability and readiness. The Air National Guard (ANG) is the authority for the approval and publication of ANG Manpower Standards. Air Force and ANG directives contain policy and procedural guidance for the operation of the CRTC Fuels Management function. This standard applies to the Alpena, Gulfport, Savannah and Volk Field CRTCs and is applicable to peacetime operations only. This standard was developed in accordance with AF Instruction (AFI) 38-201, *Determining Manpower Requirements*, and AF Manual (AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP) Processes*, and AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*. Send comments and suggested improvements on AF IMT 847, *Recommendation for Change of Publication*, through channels, to ANG, Management Engineering Branch (ANG/XPME/Operating Location TN [OLTN]), 106 Briscoe Drive, McGhee Tyson Air National Guard Base, TN 37777-6283.

***SUMMARY OF REVISIONS***

This document is substantially revised and must be completely reviewed.

1.	STANDARD DATA	3
2.	APPLICATION INSTRUCTIONS	3
3.	STATEMENT OF CONDITIONS	3

Attachment 1 -	GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	4
Attachment 2 -	WORK CENTER DESCRIPTION FUELS MANAGEMENT COMBAT READINESS TRAINING CENTER (CRTC)	7
Attachment 3 -	MANPOWER TABLE	24

**1. STANDARD DATA.**

1.1. Approval Date: 9 September 2004.

1.2. Man-hour Data Sources Operational Audit (historical record and technical.

1.3. Standard Man-hour Equation:  $Y = 321.1 + 0.7711X$ .

1.4. Workload Factor.

1.4.1. Title: A Gallon of Aviation Fuel (In Thousands) Received.

1.4.2. Definition: The average monthly number of gallons of aviation fuel (in thousands) received.

1.4.3. Source: Data input into the Fuels Automated System (FAS) and retrievable at ANG/LGSF.

**2. Application Instructions.**

2.1. Equation: Apply the man-hour equation in Paragraph 1.2., above to determine required man-hours.

2.2. Man-hour Availability Factor (MAF): Divide the resulting man-hours by the appropriate MAF. The answer will quantify the required fractional manpower.

2.4. Manpower Table: Use the Manpower Table at Attachment 3 to determine required AFSC.

2.5. Upper and Lower Extrapolation Limits:

2.5.1.  $Y_U = 566.68$ .

2.5.2.  $Y_L = 321.10$ .

**3. STATEMENT OF CONDITIONS.** The normal hours of operation for this work center are eight hours per day, five days per week. Because of extensive deployed unit-in-training support, hours of operations for this work center are frequently extended both in hours of operation and number of days per week. There are no other standard of living constraints that impact the daily operation of this work center.

DANIEL JAMES III, Lieutenant General, USAF  
Director, Air National Guard

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION***References*

AFPD 23-2, *Supplies and Materiel Management*

AFI 38-201, *Determining Manpower Requirements*

AFMAN 38-208, Volume 1, *Air Force Management Engineering Program (MEP) Processes*

AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*

TO 37-1-1, *General Operation and Inspection of Installed Fuel Storage and Dispensing Systems*

AFMS 00AA, *Standard Indirect Allowed Man-hours*

*Abbreviations and Acronyms*

**AEL** - Aeronautical Engineer Laboratory

**AF** - Air Force

**AFSC** - Air Force Specialty Code

**AFSS** - Automated Fuel Service Station

**AFTO** - Air Force Technical Order

**ANGMS** - Air National Guard Manpower Standard

**AVFUEL** - Aviation Fuel

**CRTC** - Combat Readiness Training Center

**DESC** - Defense Energy Service Center

**DFR** - Defense Fuel Region

**DFSC** - Defense Fuels Supply Center

**DoD** - Department of Defense

**DSN** - Defense Switched Network

**ECAMP** - Environmental Compliance Assessment and Management Program

**EMO** - Environmental Management Office

**EOM** - End-of-Month

**EPA** - Environmental Protection Agency

**FAS** - Fuels Automated System

**FISC** - Fuel Information Service Center

**FSII** - Fuel System Icing Inhibitor

**HAZMAT** - Hazardous Material

**IAW** - In Accordance With

**IG** - Inspector General

**JP** - Jet Petroleum

**LAN** - Local Area Network

**LIN**-Liquid Nitrogen

**LOX** - Liquid Oxygen

**MAF** - Man-hour Availability Factor

**MEP** - Management Engineering Program

**PMEL** - Precision Measurement Equipment Laboratory

**PORTS** - Paperless Ordering and Retrieval Transfer System

**PPE** - Personal Protective Equipment

**RTB** - Return to Bulk

**SIOATH** - Source Identification and Ordering Authorization

**TO** - Technical Order

**VIL** - Vehicle Identification Links

**WCD** - Work Center Description

**WLF** - Workload Factor

*Terms*

**Air National Guard Manpower Standard (ANGMS).** A numbered, specialized publication that quantifies manpower requirements for a work center. Also includes approved variances. See AFI 38-201.

**Historical Record.** Documented past work performance of the work center.

**Man-hour.** A unit of measuring work. It is equivalent to one person working at a normal pace for 60 minutes, two people working at a normal pace for 30 minutes, or a similar combination of people working at a normal pace for a period to time equal to 60 minutes.

**Manpower Standard.** The basic tool used to determine the minimum level of manpower required to support a function. It is a quantitative expression that represents a work center's man-hour requirements in response to varying levels of workload.

**Operational Audit.** A work measurement method consisting of one or a combination of the following techniques: good operator timing, historical records, technical estimate, standard time, and directed requirement.

**Programmable Workload Factor.** A workload factor (WLF) and definition that matches a program variable found in programming documents that allow the WLF to be programmable (a resource identified in a programming document).

**Staffing Pattern.** Constant manpower.

**Technical Estimate.** A determination of the standard hours required for a given task, based on an estimate by individuals who are technically and professionally competent to judge the time required.

**Work Center Description.** A format that shows work center responsibilities structured for easy measurement of work categories, tasks and subtasks.

**Attachment 2****WORK CENTER DESCRIPTION****FUELS MANAGEMENT  
COMBAT READINESS TRAINING CENTER (CRTC)****A2.1. DIRECT.****A2.1.1. BULK STORAGE OPERATION:**

**A2.1.1.1. INSPECTS SYSTEM AND PERFORMS PREVENTIVE MAINTENANCE.** Performs operator inspection and maintenance. Travels through the system and performs daily, weekly, and monthly inspection on pump house facilities, and completes inspection record in accordance with (IAW) Technical Order (TO) 37-1-1, *General Operation and Inspection of Installed Fuel Storage and Dispensing Systems*. Completes documentation on Air Force Technical Order (AFTO) Form 39, *Fuels System Inspection and Discrepancy Record*. Informs Fuel Information Service Center (FISC) of facility status.

**A2.1.1.1.1. PERFORMS DAILY INSPECTION AND PREVENTIVE MAINTENANCE.** Inspects hoses, nozzles, couplers, static ground/bonding wires, pumps and motors, leaks, filter separators, valves, pits, outlets, tanks, unloading headers, pressure and flow recorder (Type III), sampling connections, product recovery system, system area, strainers, pantograph arm, pneumatic systems, automatic tank gauging system, additive injector, fuel level alarms, Compressed Natural Gas Service Station and other items as required.

**A2.1.1.1.2. PERFORMS WEEKLY INSPECTION AND PREVENTIVE MAINTENANCE.** Inspects valves, electrical equipment, strainers, gauges, dikes, safety equipment, meters, and calibrates additive injection system and other items as required.

**A2.1.1.1.3. PERFORMS MONTHLY INSPECTION AND PREVENTIVE MAINTENANCE.** Inspects strainers, emergency switches, fill stands, warning signs, identification markings and other items as required.

**A2.1.1.1.4. PERFORMS SEMIANNUAL INSPECTION AND PREVENTIVE MAINTENANCE.** Inspects strainers, low point water drains and other items as required.

**A2.1.1.2. PERFORMS PRODUCT INVENTORY.** Inventories bulk storage tank. Travels throughout the fuel storage system for bulk storage inventory. Gauges and records fuel measurement and temperature on AF IMT 1235, *Physical Inventory (Fuels/Missile Propellants)*. Includes aviation fuel and deicing fluid products. Retrieves data from Automated Tank Gauging Systems through Fuels Manager software.

**A2.1.1.3. PERFORMS RECEIVING OPERATIONS:**

A2.1.1.3.1. RECEIVES TANK TRUCK SHIPMENT OF BULK PETROLEUM PRODUCT:

A2.1.1.3.1.1. TRAVELS TO AND FROM BULK STORAGE FOR AVIATION FUEL TANK TRUCK RECEIPT.

A2.1.1.3.1.2. PREPARES FOR RECEIPT.

A2.1.1.3.1.3. POSITIONS RECEIPT VALVE BEFORE AND AFTER RECEIPT. Opens storage tank receipt valves. Closes tank receipt valves upon completion of receipt.

A2.1.1.3.1.4. INSPECTS TANK TRUCK. Checks shipping documents, and verifies product grade. Checks fuel level and capacity markers. Performs fuel quality check.

A2.1.1.3.1.5. RECEIVES PRODUCT. Opens fuel header receipt valve, monitors fuel system and conveyance being offloaded. Stops receipt when all tank truck compartments are empty and/or when fuel header receipt valve is closed.

A2.1.1.3.1.6. COMPLETES RECEIPT DOCUMENT. Completes and signs Department of Defense (DD) Form 250, *Material Inspection and Receiving Report*, or other delivery receipt documents.

A2.1.1.3.2. RECEIVES PETROLEUM PRODUCT RETURNED TO BULK (RTB) FROM MOBILE UNIT:

A2.1.1.3.2.1. TRAVELS TO AND FROM BULK STORAGE FOR MOBILE UNIT RETURNED PRODUCT. Validates grade of product.

A2.1.1.3.2.2. POSITIONS RECEIPT VALVE BEFORE AND AFTER RECEIPT. Positions storage tank receipt valves. Ensures proper ullage in the receipt tank.

A2.1.1.3.2.3. RECEIVES PRODUCT. Determines fuel flow and monitors fuel system during receipt.

A2.1.1.3.2.4. COMPLETES RETURN TO BULK DOCUMENTATION.

A2.1.1.3.3. RECEIVES PETROLEUM PRODUCT RETURNED TO BULK STORAGE FROM FUEL RECOVERY BOWSER:

A2.1.1.3.3.1. TRAVELS TO AND FROM BULK STORAGE AND RETURNED PRODUCT. Ensures proper ullage in the receipt tank.

A2.1.1.3.3.2. RECEIVES PRODUCT. Determines fuel flow and monitors fuel system during receipt. Engages and disengages pumping systems to transfer the product. Tests bowers.



A2.1.1.3.3.3. COMPLETES RECEIPT DOCUMENT.

A2.1.1.3.4. RECEIVES PRODUCT FROM BARGE:

A2.1.1.3.4.1. TRAVELS TO AND FROM BULK STORAGE FOR AVIATION FUEL RECEIPT.

A2.1.1.3.4.2. PREPARES FOR RECEIPT. Performs the daily inspection of the general purpose vehicle, semi-trailer, boat, and unloading dock. Ensures vehicles are available for use during the operation. Ensures docking facility has the required safety equipment working properly. Documents forms for inspection. Secures the barge to the unloading dock. Grounds the barge. Secures the unloading boom. Inspects the documentation and product for accuracy and quality. Performs the special samples required for unloading aviation fuel from the barge.

A2.1.1.3.4.3. GAUGES RECEIPT STORAGE TANK BEFORE AND AFTER RECEIPT. Gauges and records fuel measurement and temperature on AF IMT 1231, *Record of Receipts (USAF Stock Fund - Fuels Division)*.

A2.1.1.3.4.4. RECEIVES PRODUCT. Positions valves before and after receipt. Opens pipeline receipt valve and receipt storage tank valve, and closes valves upon completion of receipt.

A2.1.1.3.4.5. ACCOUNTS FOR PRODUCT AND DOCUMENTS APPROPRIATE FORM.

A2.1.1.3.4.6. PERFORMS DOCK MAINTENANCE. Performs monthly maintenance on the spill boom system. Ensures oil water separator system is functional and properly maintained.

A2.1.1.3.4.7. PERFORMS COORDINATION. Ensures the Environmental Protection Agency (EPA), Coast Guard, Defense Energy Service Center (DESC), State Environmental Protection Agency, Base Bioenvironmental and Base Safety are informed of all water-based operations. Ensures proper permits are obtained and maintained.

A2.1.1.4. ISSUES BY FILL STAND:

A2.1.1.4.1. TRAVELS TO FILL STAND. Travels to fill stand. Returns for product issue.

A2.1.1.4.2. PREPARES TO ISSUE. Aids mobile unit operator in positioning refueling unit, verifies type of fuel to be issued, attaches refueling unit grounding cable, positions wheel chocks, assists vehicle operator in connecting single point nozzle to refueling unit, zeros pump meter, and opens fill stand issue valves.

A2.1.1.4.3. ISSUES PRODUCT. Starts fill stand pumps, monitors fuel system, and tests fuel level cutoff switch.

A2.1.1.4.4. CLOSES OUT ISSUE. Closes fill stand receiver valves, stops pumps, assists driver in removing fuel connection, removes grounding cable, performs walk around, and completes paperwork.

A2.1.1.5. COMPLETES AF IMT 1233, *BULK STORAGE SUMMARY*, REPORT DAILY.

A2.1.1.6. CONTROLS VEGETATION WITHIN FUELS COMPOUND.

A2.1.1.7. CONDUCTS TANK-TO-TANK TRANSFER. Travels to tank storage area, conducts transfer, documents action, and returns.

A2.1.2. FUELS DISTRIBUTION:

A2.1.2.1. PERFORMS FUELS VEHICLE/SPECIALIZED EQUIPMENT MAINTENANCE:

A2.1.2.1.1. TRANSPORTS VEHICLE/SPECIALIZED EQUIPMENT TO AND FROM MAINTENANCE. Drains/depuddles when required.

A2.1.2.1.1.1. PERFORMS NORMAL TRANSPORT TO/FROM MAINTENANCE.

A2.1.2.1.1.2. DRAINS/DEPUDDLES PRIOR TO TRANSPORTING TO MAINTENANCE.

A2.1.2.1.2. REVIEWS AND COORDINATES SCHEDULED MAINTENANCE. Reviews vehicle and equipment periodic maintenance schedule. Coordinates maintenance action with appropriate agencies.

A2.1.2.1.3. PERFORMS VEHICLE/SPECIALIZED EQUIPMENT PREVENTIVE MAINTENANCE CHECKPOINT INSPECTION. Obtains inspection forms, travels to inspection area, performs vehicle/specialized equipment checkpoint inspection, records and corrects minor discrepancies, and advises FISC, Compliance and Environmental, and Maintenance shop of maintenance discrepancy. Accomplishes daily, 180 day, annual and two year inspection and periodic maintenance of wheeled bowsers.

A2.1.2.1.4. WASHES VEHICLE. Washes vehicle, cleans cab interior, and cleans component compartments.

A2.1.2.1.5. MAINTAINS VEHICLE OPERATOR OR MAINTENANCE GUIDE. Completes vehicle inspection form and files completed form.

A2.1.2.2. PERFORMS MOBILE TRAVEL:

A2.1.2.2.1. TRAVELS FROM FISC TO SERVICING LOCATION TO PERFORM REFUEL.

A2.1.2.2.2. TRAVELS AFTER REFUEL:

A2.1.2.2.2.1. TRAVELS TO NEXT SERVICING LOCATION TO PERFORM REFUEL.

A2.1.2.2.2.2. TRAVELS BACK TO FISC.

A2.1.2.2.2.3. TRAVELS TO BULK STORAGE FOR REFILL.

A2.1.2.2.3. TRAVELS FROM BULK STORAGE AFTER REFILL:

A2.1.2.2.3.1. TRAVELS TO NEXT SERVICING LOCATION. Upon completion of refill, travels to next servicing location as directed by the FISC.

A2.1.2.2.3.2. TRAVELS TO FISC.

A2.1.2.2.4. TRAVELS FROM FISC TO SERVICING LOCATION TO PERFORM DEFUEL. Travels to servicing location.

A2.1.2.2.5. TRAVELS AFTER DEFUEL. Travels back to FISC.

A2.1.2.3. ISSUES FUEL BY MOBILE REFUELER:

A2.1.2.3.1. PREPARES FOR FUELING OPERATION. Positions refueling unit, positions wheel chocks, attaches refueling unit grounding cable, verifies type of fuel to be issued, unreels vehicle hoses, zeros pump meter, and performs duties per the applicable checklist for the fueler being used.

A2.1.2.3.2. PERFORMS FUELING OPERATION:

A2.1.2.3.2.1. PERFORMS FUELING OPERATION, 1 - 400 GALLONS.

A2.1.2.3.2.2. PERFORMS FUELING OPERATION, 401 - 1800 GALLONS.

A2.1.2.3.2.3. PERFORMS FUELING OPERATION, 1801 - 2700 GALLONS.

A2.1.2.3.2.4. PERFORMS FUELING OPERATION, 2701 - 3500 GALLONS.

A2.1.2.3.2.5. PERFORMS FUELING OPERATION, MORE THAN 3500 GALLONS.

A2.1.2.3.3. COMPLETES SERVICING OPERATION. Completes fuel accounting documents and prepares fueler for departure. Contacts FISC with information and additional dispatch instructions.

A2.1.2.3.4. REFILLS TRUCK:

A2.1.2.3.4.1. AWAITS SERVICING.

A2.1.2.3.4.2. REFILLS TRUCK FROM BULK STORAGE. Validates product grade, performs high level shut-off test, refills truck, completes accounting documents, monitors fueling equipment, performs vehicle walk around and contacts the FISC.

A2.1.2.4. PERFORMS DEFUEL:

A2.1.2.4.1. PREPARES FOR DEFUELING OPERATION. Positions unit, positions wheel chocks, attaches unit grounding cable, verifies type of fuel to be defueled, unreels vehicle hoses, zeros pump meter, and performs duties per the applicable checklist for the unit being used.

A2.1.2.4.2. PERFORMS DEFUELING OPERATION:

A2.1.2.4.2.1. PERFORMS DEFUELING OPERATION, 1801 - 2700 GALLONS.

A2.1.2.4.2.2. PERFORMS DEFUELING OPERATION, MORE THAN 3500 GALLONS.

A2.1.2.4.3. COMPLETES SERVICING OPERATION. Completes fuel accounting documents and prepares unit for departure. Contacts FISC with information and additional dispatch instructions.

A2.1.3. FUELS INFORMATION SERVICE CENTER:

A2.1.3.1. RECEIVES SERVICE REQUEST. Receives request from Job Control and other authorized agency; annotates Fuels Automated System (FAS).

A2.1.3.2. DISPATCHES FUELS OPERATOR. Checks FAS and determines vehicle/equipment availability; ensures operator qualification; alerts fuel operator; obtains and issues clipboard, portable radio, and operator checklist; and dispatches operator to service point or bulk storage.

A2.1.3.3. COORDINATES OPERATOR ASSISTANCE REQUEST. Receives and coordinates operator assistance request with base support agencies and Fuels Management personnel. Maintains contact with operator to ensure coordinated request has been complied with and resolves flightline crew delays. Resolves vehicle and equipment maintenance failures. Resolves personnel requirement and other problems that develop during the fueling operation.

A2.1.3.4. COORDINATES SPECIAL/PRIORITY REQUEST. Receives and coordinates special fuel request prior to aircraft arrival on base.

A2.1.3.5. PREPARES AIRCRAFT FUELING IDENTAPLATE AND VEHICLE IDENTIFICATION LINKS (VIL). Receives aircraft maintenance log, embosses data on

blank aircraft fueling identaplate, and coordinates and issues card to authorized customer. Receives requests for VIL from various authorized sources and encodes the VIL for each vehicle and piece of equipment needing fuel from the Automated Fuels Service Station. Maintains an active VIL listing. Records VIL issued to Vehicle Control Officers. Locks out lost and stolen VIL.

A2.1.3.6. MAINTAINS AND CONTROLS FUELS MANAGEMENT FACILITY AND EQUIPMENT KEY. Issues, receives, stores, inventories, replaces and controls Fuels Management facility, equipment and vehicle keys.

A2.1.3.7. MAINTAINS ROSTER. Maintains and verifies vehicle roster, organization tank roster, custodian roster, equipment authorized to use JP-8 roster, and cash sales roster.

A2.1.3.8. MAINTAINS AND CONTROLS EQUIPMENT AND CHECKLIST. Inventories and checks condition of radios and chargers. Ensures clipboards, checklists, and local operational procedures are current.

A2.1.3.9. PERFORMS ACCOUNTING FUNCTION:

A2.1.3.9.1. MANAGES GROUND FUEL:

A2.1.3.9.1.1. DOWNLOADS FUEL MASTER TRANSACTION LOG.

A2.1.3.9.1.2. CLOSES-OUT GROUND FUEL LOG IN FAS. Includes entering manual issues.

A2.1.3.9.2. CLOSES-OUT AVIATION FUEL LOG IN FAS.

A2.1.3.9.3. AUDITS ISSUE DOCUMENT:

A2.1.3.9.3.1. AUDITS AF IMT 1233. Receives AF IMT 1233 for each grade of bulk fuel handled, reviews for accuracy, and checks beginning and ending meter readings on AF IMT 1233 against previous day meter reading and FAS inputs.

A2.1.3.9.3.2. AUDITS AF IMT 1994, *FUELS ISSUE/DEFUEL DOCUMENT (DOD)*; AF IMT 1995, *FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD)*; OR EQUIVALENT LOCALLY APPROVED FORM. Ensures required supporting documents for cash sale/reimbursable transactions are attached and proper entries made. Removes and verifies forms; records total number of transactions accomplished; tabulates net total of issues, defuels, gains, losses, and fuel handled by meter; and audits totals accumulated with the FAS.

A2.1.3.9.3.3. AUDITS AF IMT 1233.

A2.1.3.9.3.4. AUDITS DD FORM 1348-1, *DOD SINGLE LINE (ITEM RELEASE/RECEIPT DOCUMENT [FOR CRYOGENICS ISSUE ONLY])*.

Prepares form or receives form from Cryogenics Storage and annotates issue quantities to AF IMT 1237, *Inventory (Fuels/Missiles Propellants)*.

A2.1.3.9.3.5. RECONCILES NON-DEPARTMENT OF DEFENSE (DOD) SALES REPORT. Downloads Non-Department of Defense (Non-DOD) Sales Report from Purple Hub. Audits, attaches supporting documentation and mails to appropriate agency.

A2.1.3.9.4. AUDITS RECEIPT DOCUMENT:

A2.1.3.9.4.1. AUDITS DEFENSE FUELS SUPPLY CENTER (DFSC) FORM 21.1, *SOURCE IDENTIFICATION AND ORDERING AUTHORIZATION (SIOATH)* OR EQUIVALENT. Receives form from Defense Fuel Region (DFR), reviews for accuracy, and makes corrections as necessary. Manually prepares DD Form 1886, *SIOATH Control Record*, as required.

A2.1.3.9.4.2. AUDITS AF IMT 1231 AND DD FORM 250. Receives forms from Bulk Storage; verifies AF IMT 1231 against the commercial delivery tickets; reviews form for proper entries; annotates the data into FAS. Receives DD Form 250 and audits against the appropriate regulation. Separates, files and forwards copies of DD Form 250 and the commercial delivery ticket to the proper organization. Enters receipt data into FAS.

A2.1.3.9.4.3. AUDITS DD FORM 250 (FOR CRYOGENIC RECEIPT ONLY). Receives DD Form 250 and/or supplier delivery ticket from Cryogenics Storage, reviews form for accuracy, and posts receipt quantities to AF IMT 1237.

A2.1.3.9.5. AUDITS INVENTORY DOCUMENT:

A2.1.3.9.5.1. AUDITS AF IMT 1235 OR EQUIVALENT ELECTRONIC FILE. Receives AF IMT 1235, or equivalent file, for each type of fuel product, checks for accuracy, computes totals, and checks Fuel-Strapping charts for conversion. Enters inventory into FAS.

A2.1.3.9.5.2. PREPARES/MAINTAINS FAS WITH INVENTORY (FUELS/CRYOGENICS/MISSILE PROPELLANTS) DATA. Manually inputs data into FAS. Audits the computation of all issues and receipts; computes book inventory and physical inventory within FAS; audits the gain/loss difference between the book and physical inventory and determines if a variance adjustment is necessary. Notifies the proper authority if variance adjustment exceeds local limits.

A2.1.3.9.6. PROCESSES TRANSACTION THROUGH FAS AND PURPLE HUB. Retrieves and clears rejects. Reconciles Purple Hub ledgers to FAS ledgers. Researches and resolves challenged transactions.

A2.1.3.9.7. COORDINATES FOR RE-SUPPLY OF FUEL WITH SUPPLIER. Coordinates via telephone with supplier and Fuels storage. Establishes requisition through Paperless Ordering and Retrieval Transfer System (PORTS) and FAS.

Confirms the quantity to be received, dates of projected receipts and resolves discrepancy.

A2.1.3.9.8. COORDINATES WITH APPROPRIATE AGENCY. Coordinates with Defense Energy Office, Defense Energy Support Center, and/or Major Command (MAJCOM) headquarters to resolve re-supply difficulties.

A2.1.3.9.9. PREPARES FORMS REQUIRED TO PURCHASE SUPPLIES, SERVICES, OR EQUIPMENT USED FOR DIRECT WORK. Prepares forms, coordinates with procurement office, forwards copies as required, and maintains receipt due-in file. Uses DoD Government Purchase Card to purchase supplies, services and equipment in direct support of AF Policy Directive (AFPD) 23-2, *Supplies and Materiel Management*. This includes the Resource Advisor duties for the fuels account.

A2.1.3.9.10. PERFORMS END-OF-MONTH (EOM) RECONCILIATION. Reconciles all ledgers from Purple Hub to FAS. Processes EOM physical inventory and determinable gain/loss data.

A2.1.3.9.11. FILES ACCOUNTING DOCUMENT. Files accounting document by preparing, stamping, and annotating folder. Retrieves file as required.

A2.1.3.10. PERFORMS FUELS QUALITY CONTROL TESTING:

A2.1.3.10.1. TRAVELS TO AND FROM SAMPLE DRAWING LOCATION.

A2.1.3.10.2. DRAWS SAMPLE. Gathers required equipment; draws sample for fuels test from bulk storage, mobile distribution, aircraft sump, fuel browser, support equipment, organizational tank, and cryogenics storage; and puts away equipment.

A2.1.3.10.2.1. DRAWS SAMPLE USING IN-LINE SAMPLER.

A2.1.3.10.2.2. DRAWS SAMPLE USING CRYOGENICS SAMPLER.

A2.1.3.10.3. SHIPS SAMPLE TO AREA LABORATORY. Prepares sample and container for shipment; records sample information; inspects sample for proper amount of product, appropriate container, and cleanliness of container; prepares required form and paperwork and attaches to sample; forwards sample to transportation; records laboratory test result; files report when received from laboratory; and resamples when required.

A2.1.3.10.4. PERFORMS FUELS TEST. Gathers required laboratory equipment, performs fuel test IAW applicable technical publication, and records result in the FAS computer system.

A2.1.3.10.4.1. PERFORMS BOTTLE METHOD TEST.

A2.1.3.10.4.2. PERFORMS COLOR AND PARTICLE ASSESSMENT TEST.

A2.1.3.10.4.3. PERFORMS FUEL SYSTEM ICING INHIBITOR (FSII) TEST.

A2.1.3.10.4.4. PERFORMS FUELS SOLIDS DETERMINATION TEST.  
Performs annual ground fuel tank test and monthly diesel receipt test.

A2.1.3.10.4.5. PERFORMS CONDUCTIVITY ADDITIVE TEST.

A2.1.3.10.4.6. PERFORMS SPECIFIC GRAVITY TEST.

A2.1.3.10.4.7. PERFORMS VISUAL INSPECTION TEST (COLOR / WATER / SEDIMENT).

A2.1.3.10.4.8. PERFORMS FREE WATER DETERMINATION TEST. Uses Aeronautical Engineer Laboratory (AEL).

A2.1.3.10.4.9. PERFORMS FIBER TEST.

A2.1.3.10.4.10. PERFORMS FUEL FLASHPOINT TEST.

A2.1.3.10.4.11. PERFORMS AIRCRAFT SUMP SAMPLE TEST.

A2.1.3.10.4.12. PERFORMS LIQUID OXYGEN ODOR TEST.

A2.1.3.10.4.13. SOAKS, FLUSHES AND SAMPLES NEW HOSES INSTALLED ON FACILITIES, VEHICLES AND EQUIPMENT.

A2.1.3.10.5. PERFORMS LABORATORY SET-UP. Cleans and maintains sampling equipment IAW applicable technical publication. Performs electrical continuity testing of electrostatic ground wire connections or other test; calibrates inventory equipment; and makes minor adjustments. Ensures proper laboratory room and water temperature is maintained. Documents inspection/testing as required. Replenishes propane as needed.

A2.1.3.10.6. DISPOSES OF TESTED FUEL AND CHEMICAL. Empties tested fuel and chemical into active storage or appropriate container upon completion of test.

A2.1.3.10.7. MAINTAINS CRASHED AIRCRAFT SAMPLING KIT. Inventories, inspects, and replenishes the kit after each use.

A2.1.3.10.8. MAINTAINS CAUTION TAG PROGRAM. Identifies safety hazards, prepares caution tag and attaches to equipment or facility removed from service. Annotates computer program, annotates caution tag log, notifies Fuels Management Office, Resource Control Center, and Wing Safety of tagged equipment or facility, inspects and removes caution tag upon notification that system is ready for return to service, and closes out log.



A2.1.3.10.9. PREPARES AND TRANSPORTS EQUIPMENT TO AND FROM PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL) FOR CALIBRATION AND REINSTALLS.

A2.1.4. FUELS MANAGEMENT:

A2.1.4.1. PREPARES AND MAINTAINS FORMAL CORRESPONDENCE. Ensures proper distribution of all correspondence, reports, publications and forms.

A2.1.4.1.1. MAINTAINS DOCUMENT CONTROL FILE.

A2.1.4.1.2. FORWARDS FILES TO STAGING AREA. Prepares files and forwards to staging area. Retrieves file as required.

A2.1.4.2. PREPARES MONTHLY AND YEARLY REPORT REQUIRED FOR PRODUCT ISSUED. Researches historical documents and obtains forecasted requirements. Prepares form, electronic mail or other reporting format and forwards as required. Researches, reviews, and prepares reports as required.

A2.1.4.2.1. PREPARES AND TRANSMITS THE 1884 (W), BULK PETROLEUM TERMINAL MESSAGE REPORT.

A2.1.4.2.2. PREPARES AND TRANSMITS THE MONTHLY FORECAST FOR AVIATION FUEL (AVFUEL).

A2.1.4.2.3. PREPARES AND TRANSMITS REFUELER VALIDATION.

A2.1.4.2.4. PREPARES AND TRANSMITS THE REQUIREMENTS FOR BULK PURCHASE (AVIATION FUEL) PROGRAMS.

A2.1.4.2.5. PREPARES THE GROUND FUELS, DFSC PURCHASE PROGRAM.

A2.1.4.3. IMPLEMENTS AND MAINTAINS COMPUTER SYSTEMS/NETWORK EQUIPMENT:

A2.1.4.3.1. ENSURES THE FAS SYSTEM IS AVAILABLE AND USED. Performs daily backups of the computer data. Manages the domain as the Domain Administrator. Ensures all users accomplish Security Awareness Training.

A2.1.4.3.2. COORDINATES WITH THE LOCAL AREA NETWORK (LAN) ADMINISTRATOR. Coordinates with the LAN Administrator to ensure proper access is acquired and maintained by FAS systems and users.

A2.1.4.3.3. TROUBLESHOOTS AUTOMATED DATA PROCESSING EQUIPMENT. Ensures network connectivity, software applications, computer equipment and peripherals are serviceable. Coordinates with the appropriate help desks for fixes.

A2.1.4.4. PERFORMS PUBLICATION, DIRECTIVE AND TECHNICAL ORDER MAINTENANCE.

A2.1.4.5. PERFORMS TRAVEL:

A2.1.4.5.1. PERFORMS TRAVEL TO AND FROM BASE SUPPLY. Travels to deliver/pickup automated report, miscellaneous item, or DD Form 1348-1.

A2.1.4.5.2. PERFORMS TRAVEL TO AND FROM BASE CONTRACTING OFFICE. Travels to deliver local purchase requisition, as required.

A2.1.4.6. MAINTAINS CONTROL OF HAZARDOUS MATERIAL (HAZMAT). Works with the assigned points of contact to identify the need of request, inventory and restock items maintained by the HAZMAT Pharmacy. Maintains satellite accumulation point for hazardous waste products.

A2.1.4.7. MAINTAINS THE PERSONAL PROTECTION EQUIPMENT (PPE) PROGRAM. Identifies the need to provide PPE, orders the equipment, identifies the personnel required to use the equipment, trains the people in the proper use of the equipment, issues the equipment and monitors the people for proper use.

A2.1.4.8. PREPARES PLANS. Develops and maintains Fuels Support Plan. Maintains the Fuels Facility Plan, Fuels Laboratory Chemical Hygiene Plan, Storm Water Pollution Prevention Plan and Oil and Hazardous Material Spill Prevention and Response Plan. Reviews the War and Mobilization Plan.

A2.1.4.9. PERFORMS 180-DAY INTERNAL INSPECTION OF THE COMPLIANCE AND EVALUATION ELEMENT. Includes research, preparation, travel, documentation, filing and follow-up.

A2.1.4.10. COORDINATES WITH THE BASE ENVIRONMENTAL OFFICE. Coordinates with the base environmental office to identify and determine annual recurring environmental expenses such as operating permits, sampling, testing, and disposal of petroleum wastes. Completes Tier Two reporting.

A2.1.4.11. INSPECTS PERMANENTLY INSTALLED SHOWER/EYEWASH UNITS MONTHLY/SEMIANNUALLY. Completes documentation.

A2.1.4.11.1. ACTIVATES EMERGENCY SHOWER/EYEWASH UNITS TO VERIFY PROPER OPERATION. Tests for water pressure and volume of water available. Checks orifices are free from rust, scale or obstructions. Removes/replaces/repairs spray heads or nozzles.

A2.1.4.11.2. PERFORMS INSPECTION AND MAINTENANCE PERTAINING TO EMERGENCY SHOWER/EYEWASH UNITS IN THE LABORATORY. Checks shower head height, spray patten diameter, enclosures, actuating devices, height of hand pull devices, plumbing connections, valves, and checks water stream rises between 6-12 inches from nozzle. Checks protective covers for damage.

A2.1.4.12. INITIATES ANTITERRORISM/FORCE PROTECTION TASKS AS DIRECTED.

A2.1.4.13. ENSURES FUELS AND CRYOGENIC WORKING AREAS ARE FREE OF SNOW AND ACCESSIBLE SAFELY BY WORKERS AND CUSTOMERS.

**A2.1.5. COMPLIANCE AND ENVIRONMENTAL:**

A2.1.5.1. PERFORMS COMPLIANCE INSPECTION. Prepares for inspection by reviewing responsibility, current projects, and programs. Reviews previous inspection reports of the section to be inspected, Inspector General (IG) reports, and staff assistance visit reports. Gathers required equipment, inspects facility, equipment, organizational tanks, and management procedures for safety, efficiency, and compliance with directives. Evaluates personnel performance. Puts away equipment, briefs supervisors, prepares and routes inspection report, establishes suspense, and files inspection record and report.

A2.1.5.1.1. PERFORMS 180-DAY INTERNAL INSPECTION ON ALL ELEMENTS WITHIN FUELS MANAGEMENT EXCEPT ITS OWN. Includes research, preparation, travel, documentation and filing.

A2.1.5.1.2. PERFORMS NO-NOTICE SPOT CHECK. Includes research, preparation, travel, documentation and filing.

A2.1.5.1.3. PROVIDES TECHNICAL ASSISTANCE. Briefs and provides technical assistance to supporting customers.

**A2.1.5.2. PERFORMS SPILL PREVENTION AND CONTAINMENT:**

A2.1.5.2.1. VERIFIES FUEL TANK EQUIPPED WITH HIGH-LEVEL ALARMS AND/OR AUTOMATIC HIGH-LEVEL SHUT-OFF VALVES ARE OPERATIONAL.

A2.1.5.2.2. ASSISTS BASE ENVIRONMENTAL MANAGER. Along with the Base Environmental Manager, samples and properly disposes of fuel tank dike drainage, tank bottom water, and residual petroleum or hazardous chemicals that have leached out of the petroleum products. Prepares for and participates in Environmental Compliance Assessment and Management Program (ECAMP) inspections by ANG/State/Base Environmental Management Office (EMO) agencies.

A2.1.5.2.3. ENSURES ADEQUATE SPILL PREVENTION AND CLEAN-UP MATERIALS ARE READILY AVAILABLE. Reorders materials as necessary.

**A2.1.6. CRYOGENIC FLUID SUPPORT:**

A2.1.6.1. ENSURES FACILITIES AND EQUIPMENT NEEDED FOR MISSION SUPPORT ARE AVAILABLE:

A2.1.6.1.1. TRAVELS TO AND FROM LIQUID OXYGEN(LOX)/LIQUID NITROGEN (LIN) STORAGE AREA TO PERFORM INSPECTION AND CORRECT DISCREPANCY.

A2.1.6.1.2. PERFORMS DAILY INSPECTION. Reviews TO forms, inspects tank for serviceability, inspects LOX/LIN site, corrects discrepancy, and completes paperwork.

A2.1.6.1.3. PERFORMS PERIODIC INSPECTION (180 DAYS). Obtains needed tools, performs LOX/LIN storage area inspection IAW work card, and completes paperwork.

A2.1.6.1.4. PERFORMS SPECIAL INSPECTION (360 DAYS). Obtains tools and support equipment, initiates safety procedure, performs LOX/LIN storage area inspection, purges tank IAW TO and work cards, corrects discrepancies, completes paperwork, and stows equipment.

A2.1.6.2. INSPECTS AND MAINTAINS LOX/LIN TANK MAINTENANCE SUPPORT EQUIPMENT:

A2.1.6.2.1. OBTAINS TOOLS AND TRAVELS TO SUPPORT EQUIPMENT STORAGE AREA.

A2.1.6.2.2. INSPECTS AND PERFORMS PREVENTIVE MAINTENANCE PRIOR TO USE AND DURING OPERATION.

A2.1.6.2.3. REMOVES GAUGES; TRANSPORTS TO PMEL FOR CALIBRATION; AND REINSTALLS. Checks and conducts certified oxygen cleaned process by appropriate TO.

A2.1.6.2.4. COMPLETES PAPERWORK.

A2.1.6.3. PERFORMS NONRECURRING MAINTENANCE. Obtains tools, travels to LOX/LIN area, troubleshoots, researches part number, obtains part, repairs or replaces part, performs functional check, performs corrosion control, and completes paperwork.

A2.1.6.4. PERFORMS DAILY INVENTORY OF CRYOGENIC PRODUCT. Travels to and from cryogenic storage area, determines quantity gauge reading, prepares inventory sheet, and provides inventory status to the FISC.

A2.1.6.5. ORDERS CRYOGENIC PRODUCT. Determines minimum levels of product needed to maintain mission support and War Ready Reserve. Determines funds are available to support quantity being ordered. Uses the Standard Base Supply System to input requests for product in the quantities needed.

A2.1.6.6. RECEIVES CRYOGENIC PRODUCT. Connects hose, opens tank fill valve, receives product, monitors quantity gauge, closes tank valves, and documents receipt and product loss paperwork.

A2.1.6.6.1. TRAVELS TO AND FROM CRYOGENICS STORAGE AREA FOR RECEIPT.

A2.1.6.6.2. RECEIVES LOX.

A2.1.6.6.3. RECEIVES LIN.

A2.1.6.7. ISSUES CRYOGENIC PRODUCT. Obtains storage tank maintenance form and PPE, receives cart and/or ground servicing unit maintenance forms, grounds cart as required, connects hose, opens tank and cart valves, issues product, monitors quantity gauge, closes valves, performs all tasks as required, and completes paperwork.

A2.1.6.7.1. TRAVELS TO AND FROM CRYOGENICS STORAGE AREA FOR ISSUE.

A2.1.6.7.2. ISSUES TO LOX SERVICING CART.

A2.1.6.7.3. ISSUES TO LIN SERVICING CART/VEHICLE.

A2.1.6.7.4. TRANSFERS CRYOGENIC PRODUCT. Transfers LOX or LIN from one tank to another for inspection.

#### A2.1.7. SERVICE STATION OPERATIONS AND MAINTENANCE:

##### A2.1.7.1. INSPECTS SYSTEM AND PERFORMS PREVENTIVE MAINTENANCE:

###### A2.1.7.1.1. PERFORMS OPERATOR INSPECTION AND MAINTENANCE.

Travels through the system and performs daily, weekly, and monthly inspection on pump house facilities, and completes inspection record IAW TO 37-1-1. Completes documentation on AFTO Form 39. Informs FISC of facility status.

A2.1.7.1.2. PERFORMS DAILY INSPECTION AND PREVENTIVE MAINTENANCE. Inspects hoses, nozzles, couplers, static ground/bonding wires, pumps and motors, leaks, filter separators, valves, pits, outlets, tanks, unloading headers, sampling connections, product recovery system, system area, strainers, pneumatic systems, automatic tank gauging system, fuel level alarms, Compressed Natural Gas Service Station and other items as required.

A2.1.7.1.3. PERFORMS WEEKLY INSPECTION AND PREVENTIVE MAINTENANCE. Inspects valves, electrical equipment, strainers, gauges, dikes, safety equipment, meters and other items as required.

A2.1.7.1.4. PERFORMS MONTHLY INSPECTION AND PREVENTIVE MAINTENANCE. Inspects strainers, emergency switches, fill stands, warning signs, identification markings and other items as required.

A2.1.7.1.5. PERFORMS SEMIANNUAL INSPECTION AND PREVENTIVE MAINTENANCE. Inspects strainers, low point water drains and other items as required. Completes the Automated Fuel Service Station (AFSS) Pulsar Count Test.

A2.1.7.2. PERFORMS PRODUCT INVENTORY:

A2.1.7.2.1. TRAVELS FOR PRODUCT INVENTORY. Travels through fuel storage system for service station inventory. Travels for the purpose of gauging bulk storage tanks.

A2.1.7.2.2. INVENTORIES BULK STORAGE TANK. Gauges and records fuel measurement and temperature. Retrieves data from Automated Tank Gauging Systems through Fuels Manager software.

A2.1.7.3. PERFORMS RECEIVING OPERATION. Receives tank wagon/truck shipment of bulk petroleum product.

A2.1.7.3.1. TRAVELS TO AND FROM BULK STORAGE FOR GROUND FUEL RECEIPT.

A2.1.7.3.2. PREPARES FOR RECEIPT.

A2.1.7.3.3. POSITIONS RECEIPT VALVE BEFORE AND AFTER RECEIPT. Opens storage tank receipt valves. Closes tank receipt valves upon completion of receipt.

A2.1.7.3.4. INSPECTS TRUCK. Checks shipping documents, verifies fuel level and capacity markers, and performs fuel quality check.

A2.1.7.3.5. RECEIVES PRODUCT. Opens fuel header receipt valve, monitors fuel system, and stops receipt when all tank truck compartments are empty and/or when fuel header receipt valve is closed.

A2.1.7.3.6. COMPLETES RECEIPT DOCUMENT. Completes and signs DD Form 250 and other delivery receipt documents.

A2.1.7.4. PERFORMS MANUAL ISSUE:

A2.1.7.4.1. ISSUES BY C300. Travels to and from servicing location, issues fuel, and documents transaction.

A2.1.7.4.2. FILLS C300. Travels to and from service station, verifies fuel grade, activates pump, and prepares documentation.

A2.1.8. FUELS TRAINING:

A2.1.8.1. PREPARES AND CONDUCTS HAZARDOUS COMMUNICATION TRAINING AND DOCUMENTATION.

A2.1.8.2. TRAINS FUELS PERSONNEL IN THE RESPONSIBILITIES OF HAZARDOUS MATERIAL EMERGENCY PLANNING AND RESPONSE COMPLIANCE, THE BASE SPILL PREVENTION COUNTERMEASURES AND CONTINGENCY PLAN, AND THE BASE HAZMAT EMERGENCY PLANNING AND RESPONSE PLAN WHICH ADDRESS FEDERAL, STATE, AND LOCAL SPILL PREVENTION AND RESPONSE REQUIREMENTS.

A2.1.8.3. PREPARES AND CONDUCTS TRAINING FOR ORGANIZATIONAL TANK CUSTODIANS.

A2.1.8.4. PREPARES AND CONDUCTS STORM WATER DISCHARGE TRAINING.

A2.1.8.5. PREPARES AND CONDUCTS CONFINED SPACE ENTRY TRAINING.

**A2.2. INDIRECT.** Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are: Administers Civilian, Officer, and Enlisted Personnel; Directs Work Center Activity; Provides Administrative Support; Prepares for and Conducts/Attends Meeting; Administers Training; Manages Supplies; Maintains Equipment; and Performs Cleanup. See AFMS 00AA, *Standard Indirect Allowed Man-hours*.

**Attachment 3****MANPOWER TABLE****Table A3.1. Standard Manpower Table.**

<b>Air Force Specialty Title</b>	<b>AFSC</b>	<b>Grade</b>	<b>Manpower Requirements</b>		
Fuels Craftsman	2F0X1	AGR	1	2	2
Fuels Journeyman	2F0X1	AGR	1	1	2
Total:			2	3	4